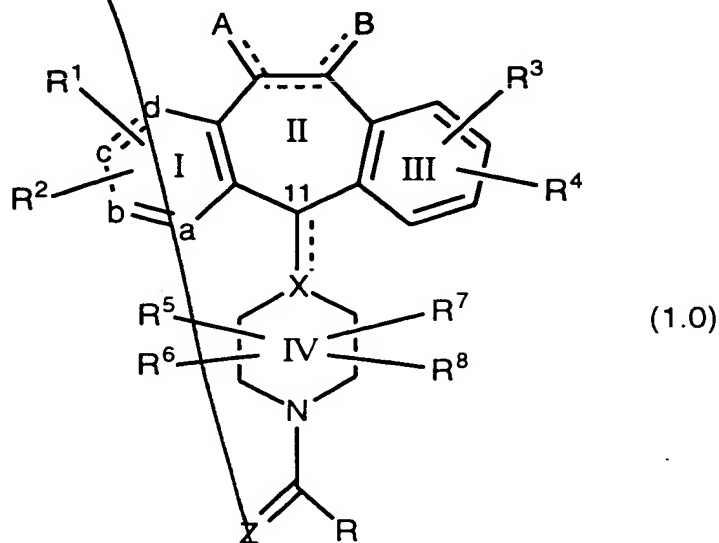


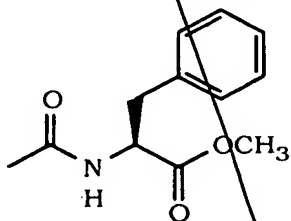
WHAT IS CLAIMED IS:

1. A method for inhibiting the abnormal growth of cells comprising administering an effective amount of a compound of Formula
- 5 1.0:



or a pharmaceutically acceptable salt or solvate thereof, wherein:

- one of a, b, c and d represents N or NR⁹ wherein R⁹ is O⁻, -CH₃ or -(CH₂)_nCO₂H wherein n is 1 to 8, and the remaining a, b, c and d groups represent CR¹ or CR²; or
- each of a, b, c, and d are independently selected from CR¹ or CR²;
- each R¹ and each R² is independently selected from H, halo, -CF₃, -OR¹⁰, -COR¹⁰, -SR¹⁰, -S(O)_tR¹¹ (wherein t is 0, 1 or 2), -SCN, -N(R¹⁰)₂, -NO₂, -OC(O)R¹⁰, -CO₂R¹⁰, -OCO₂R¹¹, -CN, -NHC(O)R¹⁰, -NHCO₂R¹⁰, -CONHR¹⁰, -CONHCH₂CH₂OH, -NR¹⁰COOR¹¹, -SR¹¹C(O)OR¹¹,
- 15 -SR¹¹N(R⁷⁵)₂ (wherein each R⁷⁵ is independently selected from H and -C(O)OR¹¹), benzotriazol-1-yloxy, tetrazol-5-ylthio, or substituted tetrazol-5-ylthio, alkynyl, alkenyl or alkyl, said alkyl or alkenyl group optionally
- 20 being substituted with halo, -OR¹⁰ or -CO₂R¹⁰;



- SR¹¹N(R⁷⁵)₂ (wherein each R⁷⁵ is independently selected from H and -C(O)OR¹¹), benzotriazol-1-yloxy, tetrazol-5-ylthio, or substituted tetrazol-5-ylthio, alkynyl, alkenyl or alkyl, said alkyl or alkenyl group optionally
- 20 being substituted with halo, -OR¹⁰ or -CO₂R¹⁰;
- R³ and R⁴ are the same or different and each independently represents H, any of the substituents of R¹ and R², or R³ and R⁴ taken

together represent a saturated or unsaturated C₅-C₇ fused ring to the benzene ring;

R⁵, R⁶, R⁷ and R⁸ each independently represents H, -CF₃, -COR¹⁰, alkyl or aryl, said alkyl or aryl optionally being substituted with -OR¹⁰,
 5 -SR¹⁰, -S(O)_tR¹¹, -NR¹⁰COOR¹¹, -N(R¹⁰)₂, -NO₂, -COR¹⁰, -OCOR¹⁰,
 -OCO₂R¹¹, -CO₂R¹⁰, OPO₃R¹⁰ or one of R⁵, R⁶, R⁷ and R⁸ can be taken
 in combination with R⁴⁰ as defined below to represent -(CH₂)_r wherein r
 is 1 to 4 which can be substituted with lower alkyl, lower alkoxy, -CF₃ or
 aryl, or R⁵ is combined with R⁶ to represent =O or =S and/or R⁷ is
 10 combined with R⁸ to represent =O or =S;

R¹⁰ represents H, alkyl, aryl, or aralkyl;

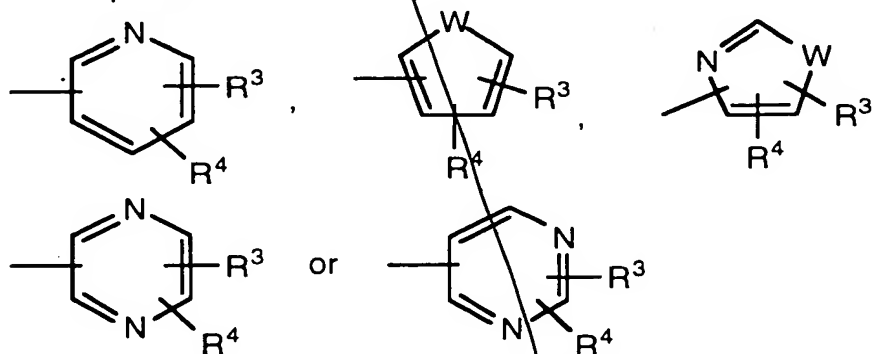
R¹¹ represents alkyl or aryl;

X represents N, OH or C, which C may contain an optional double
 bond, represented by the dotted line, to carbon atom 11;

15 the dotted line between carbon atoms 5 and 6 represents an
 optional double bond, such that when a double bond is present, A and B
 independently represent -R¹⁰, halo, -OR¹¹, -OCO₂R¹¹ or -OC(O)R¹⁰, and
 when no double bond is present between carbon atoms 5 and 6, A and B
 each independently represent H₂, -(OR¹¹)₂; H and halo, dihalo, alkyl and
 20 H, (alkyl)₂, -H and -OC(O)R¹⁰, H and -OR¹⁰, =O, aryl and H, =NOR¹⁰ or
 -O-(CH₂)_p-O- wherein p is 2, 3 or 4;

R represents R⁴⁰, R⁴², R⁴⁴, or R⁵⁴, as defined below;

R⁴⁰ represents H, aryl, alkyl, cycloalkyl, alkenyl, alkynyl or -D
 wherein -D represents

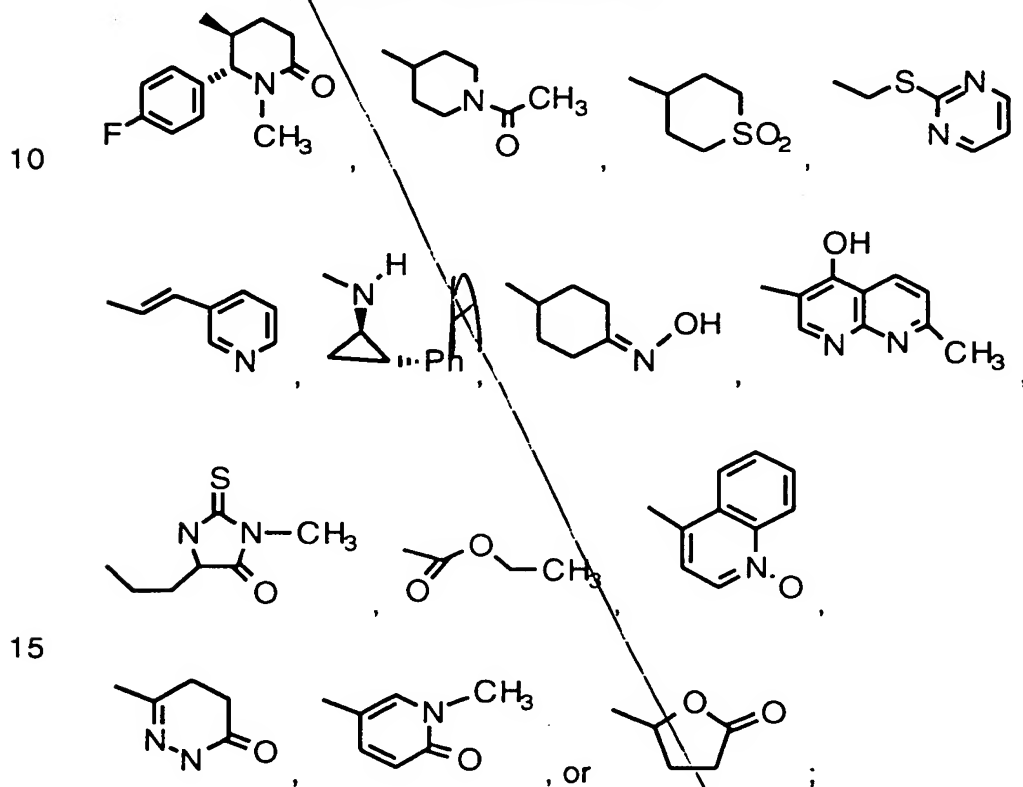


25 wherein R³ and R⁴ are as previously defined and W is O, S or NR¹⁰
 wherein R¹⁰ is as defined above; said R⁴⁰ cycloalkyl, alkenyl and alkynyl
 groups being optionally substituted with from 1-3 groups selected from
 halo, -CON(R¹⁰)₂, aryl, -CO₂R¹⁰, -OR¹², -SR¹², -N(R¹⁰)₂,
 30 -N(R¹⁰)CO₂R¹¹, -COR¹², -NO₂ or D, wherein -D, R¹⁰ and R¹¹ are as

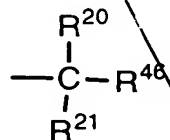
defined above and R^{12} represents R^{10} , $-(CH_2)_mOR^{10}$ or $-(CH_2)_qCO_2R^{10}$ wherein R^{10} is as previously defined, m is 1 to 4 and q is 0 to 4; said alkenyl and alkynyl R^{40} groups not containing $-OH$, $-SH$ or $-N(R^{10})_2$ on a carbon containing a double or triple bond respectively; or

5 R^{40} represents phenyl substituted with a group selected from $-SO_2NH_2$, $-NHSO_2CH_3$, $-SO_2NHCH_3$, $-SO_2CH_3$, $-SOCH_3$, $-SCH_3$, or $-NHSO_2CF_3$, preferably, said group is located in the para position of the phenyl ring; or

R^{40} represents a group selected from



R^{42} represents



20 wherein R^{20} , R^{21} and R^{46} are each independently selected from the group consisting of:

- (1) H;
- (2) $-(CH_2)_qSC(O)CH_3$ wherein q is 1 to 3;
- (3) $-(CH_2)_qOSO_2CH_3$ wherein q is 1 to 3;
- (4) $-OH$;

(5) $-\text{CS}(\text{CH}_2)_w(\text{substituted phenyl})$ wherein w is 1 to 3 and the substituents on said substituted phenyl group are the same substituents as described below for said substituted phenyl;

(6) $-\text{NH}_2$;

5 (7) $-\text{NHCBZ}$;

(8) $-\text{NHC}(\text{O})\text{OR}^{22}$ wherein R^{22} is an alkyl group having from 1 to 5 carbon atoms, or R^{22} represents phenyl substituted with 1 to 3 alkyl groups;

(9) alkyl;

10 (10) $-(\text{CH}_2)_k\text{phenyl}$ wherein k is 1 to 6;

(11) phenyl;

(12) substituted phenyl wherein the substituents are selected from the group consisting of: halo, NO_2 , $-\text{OH}$, $-\text{OCH}_3$, $-\text{NH}_2$, $-\text{NHR}^{22}$, $-\text{N}(\text{R}^{22})_2$, alkyl, $-\text{O}(\text{CH}_2)_t\text{phenyl}$ (wherein t is from 1 to 3), and $-\text{O}(\text{CH}_2)_t\text{substituted phenyl}$ (wherein t is from 1 to 3);

(13) naphthyl;

(14) substituted naphthyl, wherein the substituents are as defined for substituted phenyl above;

20 (15) bridged polycyclic hydrocarbons having from 5 to 10 carbon atoms;

(16) cycloalkyl having from 5 to 7 carbon atoms;

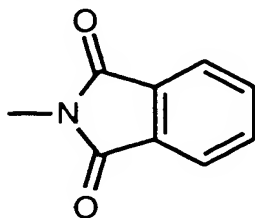
(17) heteroaryl;

(18) hydroxyalkyl;

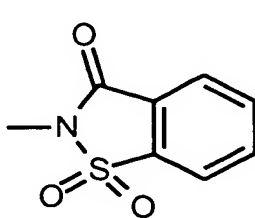
25 (19) substituted pyridyl or substituted pyridyl N-oxide wherein the substituents are selected from methylpyridyl, morpholinyl, imidazolyl, 1-piperidynyl, 1-(4-methylpiperazinyl), $-\text{S}(\text{O})_t\text{R}^{11}$, or any of the substituents given above for said substituted phenyl, and said substituents are bound to a ring carbon by replacement of the hydrogen bound to said carbon;

30

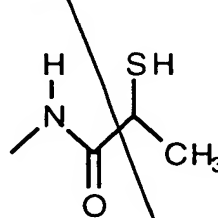
(20)



(21)

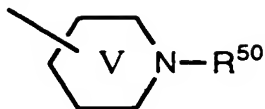


(22)



(23) $-\text{NHC}(\text{O})-(\text{CH}_2)_k\text{phenyl}$ or $-\text{NH}(\text{O})-(\text{CH}_2)_k\text{substituted phenyl}$, wherein said k is as defined above;

(24) piperidine Ring V:



wherein R^{50} represents H, alkyl, alkylcarbonyl, alkyloxycarbonyl, haloalkyl, or $-C(O)NH(R^{10})$ wherein R^{10} is H or alkyl;

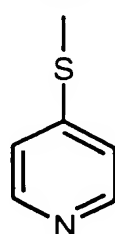
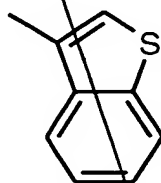
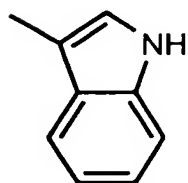
5 (25) $-NHC(O)CH_2C_6H_5$ or $-NHC(O)CH_2$ -substituted- C_6H_5 ;

(26) $-NHC(O)OC_6H_5$;

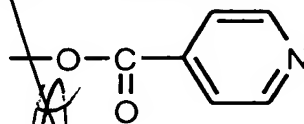
(27)

(28)

(29)



(30) $-OC(O)$ -heteroaryl, for example



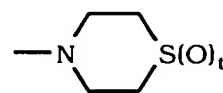
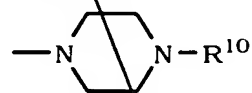
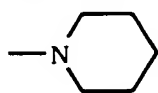
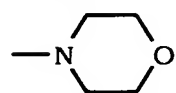
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(31) $-O$ -alkyl (e.g., $-OCH_3$); and

(32) $-CF_3$;

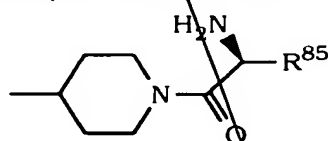
(33) $-CN$;

(34) a heterocycloalkyl group of the formula



15

(35) a piperidinyl group of the formula

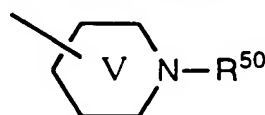


wherein R^{85} is H, alkyl, or alkyl substituted by $-OH$ or $-SCH_3$; or

R^{20} and R^{21} taken together form a $=O$ group and the remaining

20 R^{46} is as defined above; or

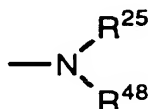
Two of R^{20} , R^{21} and R^{46} taken together form piperidine Ring V



wherein R⁵⁰ is as defined above;

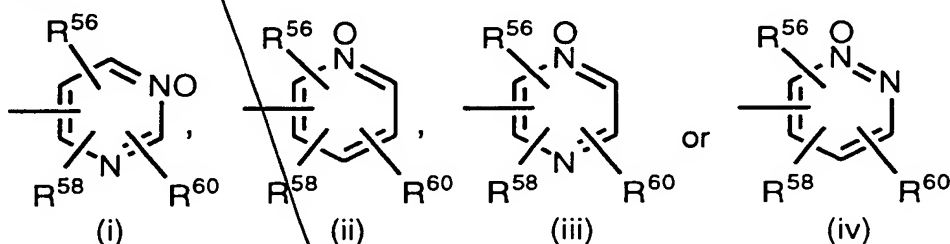
with the proviso that R⁴⁶, R²⁰ and R²¹ are selected such that the carbon atom to which they are bound does not contain more than one heteroatom;

5 R⁴⁴ represents



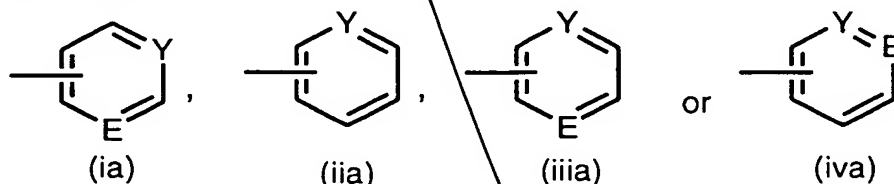
wherein R²⁵ represents heteroaryl, N-methylpiperdinyI or aryl; and R⁴⁸ represents H or alkyl;

10 R⁵⁴ represents an N-oxide heterocyclic group of the formula (i), (ii), (iii) or (iv):



15 wherein R⁵⁶, R⁵⁸, and R⁶⁰ are the same or different and each is independently selected from H, halo, -CF₃, -OR¹⁰, -C(O)R¹⁰, -SR¹⁰, -S(O)_eR¹¹ (wherein e is 1 or 2), -N(R¹⁰)₂, -NO₂, -CO₂R¹⁰, -OCO₂R¹¹, -OCOR¹⁰, alkyl, aryl, alkenyl or alkynyl, which alkyl may be substituted with -OR¹⁰, -SR¹⁰ or -N(R¹⁰)₂ and which alkenyl may be substituted with OR¹¹ or SR¹¹; or

R⁵⁴ represents an N-oxide heterocyclic group of the formula (ia), (iia), (iiia) or (iva):



20

wherein Y represents N⁺-O⁻ and E represents N; or

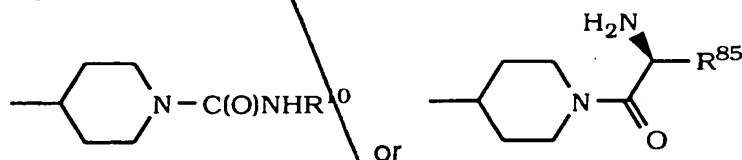
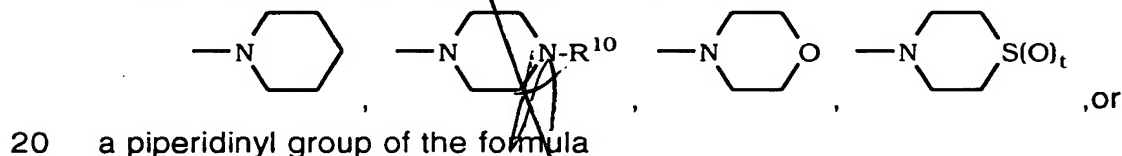
R⁵⁴ represents an alkyl group substituted with one of said N-oxide heterocyclic groups (i), (ii), (iii), (iv), (ia), (iia), (iiia) or (iva);

25 Z represents O or S such that R can be taken in combination with R⁵, R⁶, R⁷ or R⁸ as defined above, or R represents R⁴⁰, R⁴², R⁴⁴ or R⁵⁴.

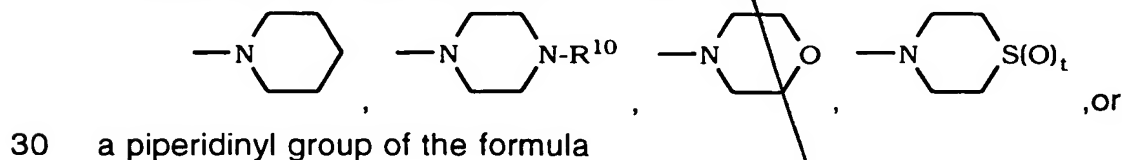
2. The method of Claim 1 wherein a is N and b, c, and d are carbon; R¹ and R² are the same or different and each is independently

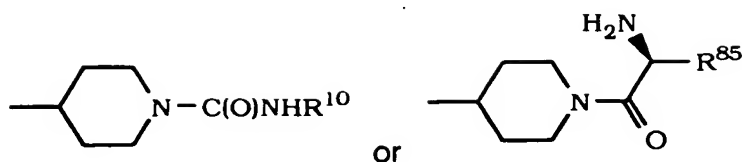
selected from H, halo, $-\text{CF}_3$, lower alkyl, or benzotriazol-1-yloxy, and R^1 is at the C-4 position and R^2 is at the C-3 position; R^3 and R^4 are the same or different and each is independently selected from H or halo, and R^3 is at the C-8 position and R^4 is at the C-9 position; when the double bond between carbon atoms 5 and 6 is present, A and B independently represent H, lower alkyl or alkyloxy; and when the double bond between carbon atoms 5 and 6 is absent, A and B independently represent H_2 , $(-\text{H}$ and $-\text{OH})$ or $=\text{O}$; R^5 , R^6 , R^7 , and R^8 are H; Z is O; and R represents R^{42} and the R^{46} is selected from phenyl, substituted phenyl, heteroaryl or piperidine Ring V.

3. The method of Claim 2 wherein R^{20} and R^{21} are each independently selected from H and alkyl; R^3 is Cl; R^4 is H; R^1 and R^2 are individually selected from H, benzotriazol-1-yloxy, C_1 to C_4 alkyl or halo; and R^{46} represents 3-pyridyl, 3-pyridyl N-oxide, triazolyl, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl, 4-N-methylpiperidinyl, 3-N-acetylpiperidinyl, 4-N-acetylpiperidinyl, 1-N-methylpiperazinyl, 1-piperazinyl, a heterocycloalkyl of the formula



4. The method of Claim 3 wherein both R^{20} and R^{21} are H, or both R^{20} and R^{21} are methyl; R^1 and R^2 are individually selected from H, Br, Cl, methyl or benzotriazol-1-yloxy; and R^{46} represents 3-pyridyl, 3-pyridyl N-oxide, triazolyl, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl or 4-N-methylpiperidinyl, 1-N-methylpiperazinyl, 1-piperazinyl, a heterocycloalkyl of the formula





5. The method of Claim 1 wherein a is N and b, c, and d are carbon; R¹ and R² are the same or different and each is independently selected from H, halo, -CF₃, lower alkyl, or benzotriazol-1-yloxy, and R¹ is at the C-4 position and R² is at the C-3 position; R³ and R⁴ are the same or different and each is independently selected from H or halo, and R³ is at the C-8 position and R⁴ is at the C-9 position; when the double bond between carbon atoms 5 and 6 is present, A and B independently represent H, lower alkyl or alkyloxy; and when the double bond between carbon atoms 5 and 6 is absent, A and B independently represent H₂, (-H and -OH) or =O; R⁵, R⁶, R⁷, and R⁸ are H; Z is O; and R represents R⁴⁴ and the R²⁵ represents pyridyl, pyridyl N-oxide, phenyl, 3-N-methylpiperidiny1 or 4-N-methylpiperidiny1.

6. The method of Claim 5 wherein R²⁵ represents 3-pyridyl or phenyl; R³ is Cl; R⁴ is H; R⁴⁸ represents are H or methyl; and R¹ and R² are individually selected from H, benzotriazol-1-yloxy, C₁ to C₄ alkyl or halo.

7. The method of Claim 6 wherein R¹ and R² are individually selected from H, Br, Cl, methyl or benzotriazol-1-yloxy.

8. The method of Claim 1 wherein the the cells inhibited are tumor cells expressing an activated ras oncogene.

9. The method of Claim 8 wherein the cells inhibited are pancreatic tumor cells, lung cancer cells, myeloid leukemia tumor cells, thyroid follicular tumor cells, myelodysplastic tumor cells, epidermal carcinoma tumor cells, bladder carcinoma tumor cells or colon tumors cells.

10. The method of Claim 1 wherein the inhibition of the abnormal growth of cells occurs by the inhibition of ras farnesyl protein transferase.

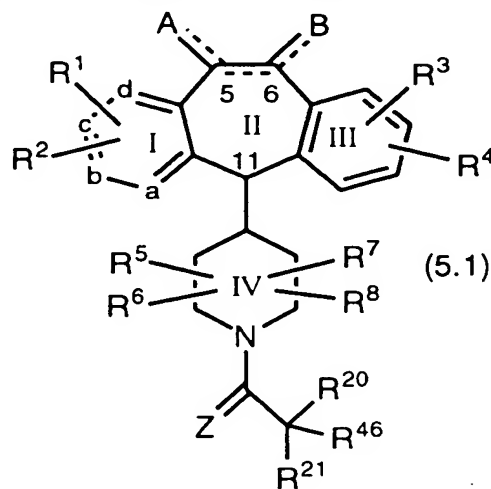
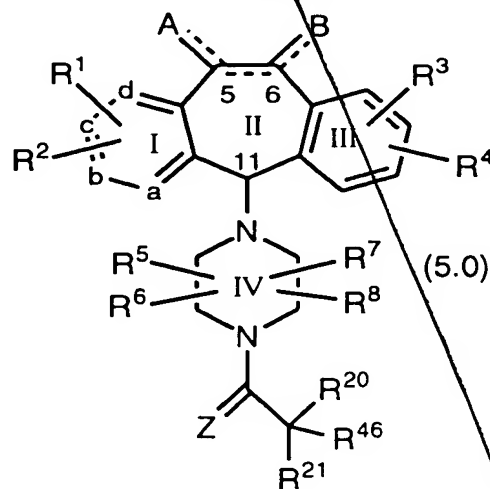
11. The method of Claim 1 wherein the inhibition is of tumor cells wherein the Ras protein is activated as a result of oncogenic mutation in genes other than the Ras gene.

5

12. The method of Claim 1 wherein the compound is selected from the compounds of Examples: 1, 2, 3, 4, 5, 6, 19, 42, 43, 44, 45, 46, 47, 48, 49, 75, 76, 78, 82, 83, 84, 85, 89, 121, 180, 182, 183, 184, 187 structure 6.7, 187 structure 6.8, 192, 196, 197, 198, 200, 201, 206, 222, 223, 224, 225, 226, 227, 233, 234, 236, 239, 246, 247, 248, 249, 250, 251, 261, 262, 266, 267, 269, 273, 276, 283, 285, 286, 287, 288, 289, 291, 292, 293, 299, 300, 301, 303, 307, 309, 311, 312, 313, 314, 316, 350, 351, 352, 354, 356, 426, 400-G, 400-C, 400-F, 400-E, 425-H, 401, 400-B, 400, 400-L, 425-U, 413, 400-J, 417-B, 438, 411-W, 425-O, 400-D, 400-K, 410-G or 400-H.

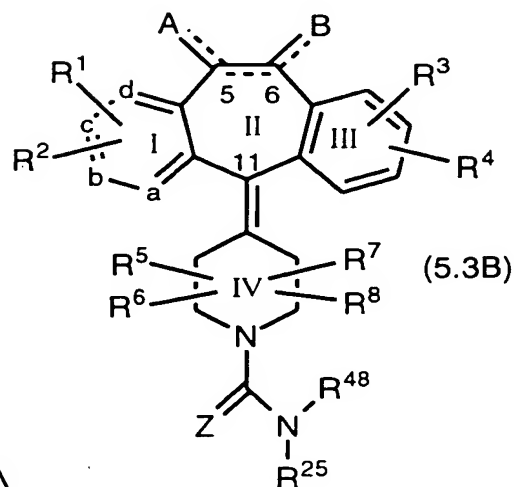
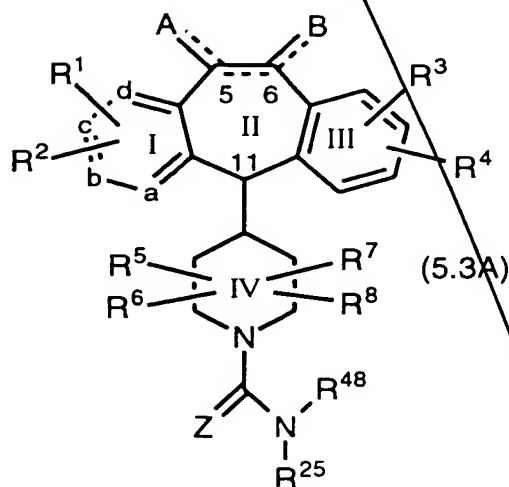
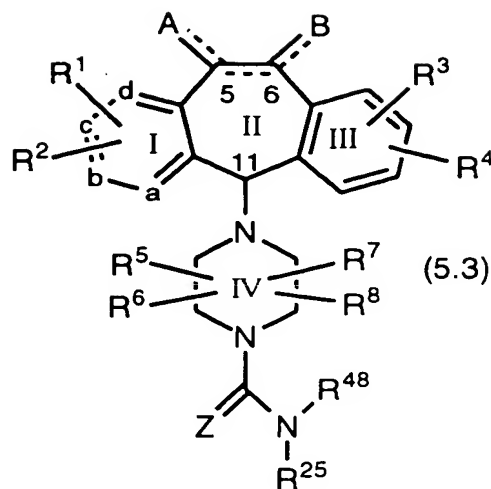
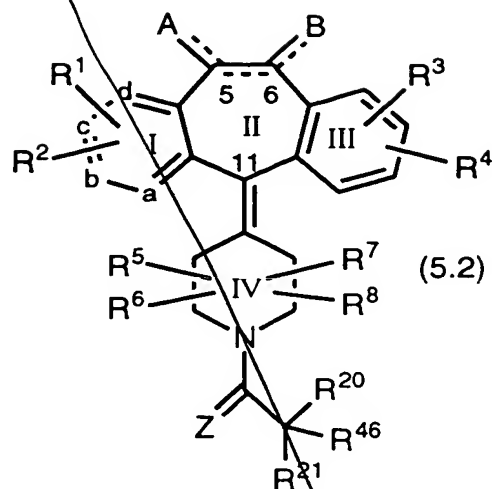
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13. A compound selected from a compound of the formula:



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Sub
A'



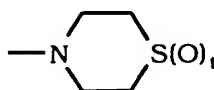
or

- or a pharmaceutically acceptable salt or solvate thereof, wherein all the
- 5 substituents are as defined in Claim 1, and wherein for the compounds of Formula 5.2 the substituents R^{20} , R^{21} , and R^{46} are selected such that when one of said substituents R^{20} , R^{21} , and R^{46} is selected from the group consisting of: (1) H, (4) -OH, (6) -NH₂, (8) -NHC(O)OR²², (9) alkyl, (11) phenyl, (17) heteroaryl, (18) hydroxyalkyl, (19) substituted pyridyl,
- 10 (12) substituted phenyl and (31) -O-alkyl, then the remaining two of said substituents R^{20} , R^{21} and R^{46} cannot both be H when: (a) R^1 and R^2 are both H, and (b) the double bond between C-5 and C-6 is absent, and (c) both A and B are H₂, and (d) R^4 is H, and (e) R^3 is H or Cl at C-8.

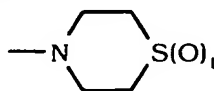
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14. The compound of Claim 13 wherein a is N and b, c, and d are carbon; R^1 and R^2 are the same or different and each is independently selected from H, halo, -CF₃, lower alkyl, or benzotriazol-1-

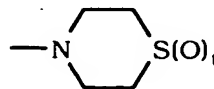
- 10 yloxy, and R¹ is at the C-4 position and R² is at the C-3 position; R³ and R⁴ are the same or different and each is independently selected from H or halo, and R³ is at the C-8 position and R⁴ is at the C-9 position; when the double bond between carbon atoms 5 and 6 is present, A and B independently represent H, lower alkyl or alkyloxy; and when the double bond between carbon atoms 5 and 6 is absent, A and B independently represent H₂, (-H and -OH) or =O; R⁵, R⁶, R⁷, and R⁸ are H; Z is O; and R⁴⁶ is selected from phenyl, substituted phenyl, heteroaryl, piperidine Ring V, 1-N-methylpiperazinyl, 1-piperazinyl or a heterocycloalkyl of the formula



- 15 15. The compound of Claim 14 wherein R²⁰ and R²¹ are each independently selected from H and alkyl; R³ is Cl; R⁴ is H; R¹ and R² are individually selected from H, benzotriazol-1-yloxy, C₁ to C₄ alkyl or halo; and R⁴⁶ represents 3-pyridyl, 3-pyridyl N-oxide, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl, 4-N-methylpiperidinyl, 3-N-acetylpiperidinyl, 4-N-acetylpiperidinyl, 1-N-methylpiperazinyl, 1-piperazinyl or a heterocycloalkyl of the formula



- 20 16. The compound of Claim 15 wherein both R²⁰ and R²¹ are H, or both R²⁰ and R²¹ are methyl; R¹ and R² are individually selected from H, Br, Cl, methyl or benzotriazol-1-yloxy; and R⁴⁶ represents 3-pyridyl, 3-pyridyl N-oxide, triazolyl, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl, 4-N-methylpiperidinyl, 1-N-methylpiperazinyl, 1-piperazinyl or a heterocycloalkyl of the formula



- 30 17. The compound of Claim 13 wherein a is N and b, c, and d are carbon; R¹ and R² are the same or different and each is independently selected from H, halo, -CF₃, lower alkyl, or benzotriazol-1-yloxy, and R¹ is at the C-4 position and R² is at the C-3 position; R³ and

R⁴ are the same or different and each is independently selected from H or halo, and R³ is at the C-8 position and R⁴ is at the C-9 position; when the double bond between carbon atoms 5 and 6 is present, A and B independently represent H, lower alkyl or alkyloxy; and when the double bond between carbon atoms 5 and 6 is absent, A and B independently represent H₂, (-H and -OH) or =O; R⁵, R⁶, R⁷, and R⁸ are H; Z is O; and R²⁵ represents phenyl, 3-pyridyl, 3-pyridyl N-oxide, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl, 4-N-methylpiperidinyl, 3-N-acetylpiperidinyl or 4-N-acetylpiperidinyl.

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18. The compound of Claim 17 wherein R²⁵ represents phenyl, 3-pyridyl, 3-pyridyl N-oxide, 4-pyridyl, 4-pyridyl N-oxide, 3-N-methylpiperidinyl or 4-N-methylpiperidinyl; R³ is Cl; R⁴ is H; R⁴⁸ represents are H or methyl; and R¹ and R² are individually selected from H, benzotriazol-1-yloxy, C₁ to C₄ alkyl or halo.

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19. The compound of Claim 18 wherein R¹ and R² are individually selected from H, Br, Cl, methyl or benzotriazol-1-yloxy.

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20. The compound of Claim 13 selected from a compound having the structure number: 5.17, 5.18, 5.19, 5.20, 5.21, 5.22, 5.23, 5.60, 5.61, 5.62, 5.63, 5.64, 5.65, 5.66, 5.67, 5.68, 5.69, 5.70, 5.71, 5.72, 5.73, 5.74, 5.75, 5.76, 5.77, 5.78, 5.79, 5.81, 5.82, 5.83, 5.84, 5.85, 5.90, 5.91, 5.96, 5.97, 5.98, 5.99, 5.100, 5.101, 5.108, 5.109, 5.110, 5.111, 5.138, 5.139, 5.140, 5.141, 5.143, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.24, 5.26, 5.27, 5.29, 5.30, 5.31, 5.32, 5.33, 5.34, 5.35, 5.36, 5.37, 5.38, 5.40, 5.42, 5.44, 5.45, 5.46, 5.48, 5.92, 5.93, 5.94, 5.95, 5.102, 5.103, 5.104, 5.105, 5.107, 5.114, 5.115, 5.121, 5.122, 5.123, 5.124, 5.125, 5.126, 5.127, 5.128, 5.129, 5.132, 5.133, 5.134, 5.135, 5.136, 5.145, 5.146, 5.147, 5.149, 5.150, 5.151, 5.152, 5.153, 5.154, 5.200, 5.201, 5.202, 5.203, 5.204, 5.205, 5.206, 5.207, 5.208, 5.209, 5.210, 5.211, 5.212, 5.213, 5.214, 5.215, 5.216, 5.217, 5.218, 5.219, 5.220, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.17, 6.19, 6.12, 6.13 or 6.14; or selected from the compound of example number 82, 82A, 235, 316, 323, 310, 350, 352, 355, 89, 180, 181, 204, 234, 287, 288, 289, 290, 295, 296, 297, 298, 299, 300, 301, 303, 304, 305, 307, 309, 311, 356, 312, 313, 314, 354, 291, 292, 293 or 294 .

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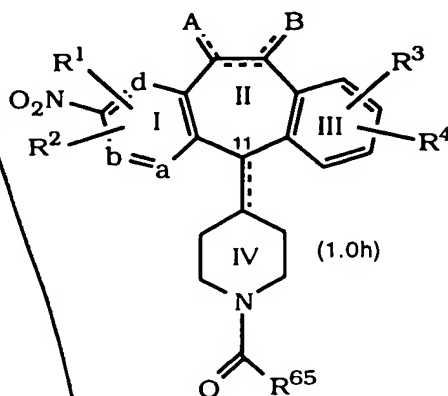
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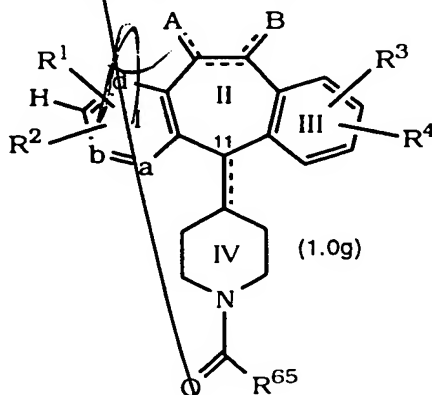
21. A pharmaceutical composition for inhibiting the abnormal growth of cells comprising an effective amount of compound of Claim 13 in combination with a pharmaceutically acceptable carrier.

22. A process for producing 3-nitro substituted compounds of Formula 1.0h:



wherein R¹, R², R³, R⁴, A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, and R⁶⁵ represents H or -OR⁶⁶ wherein R⁶⁶ represents alkyl, comprising

reacting one molar equivalent of a compound of Formula 1.0g:



wherein R¹, R², R³, R⁴, A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, and R⁶⁵ represents H or -OR⁶⁶ wherein R⁶⁶ represents alkyl;

with one molar equivalent of a nitrating reagent, said nitrating reagent being preformed by mixing, at cold temperature, equimolar amounts of tetrabutyl ammonium nitrate with TFAA;

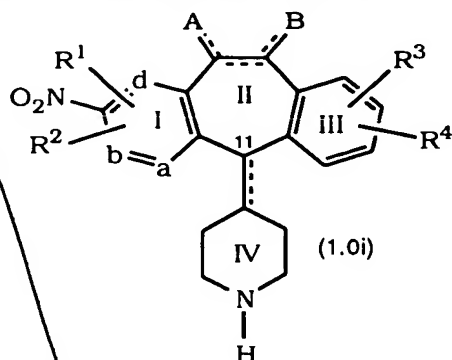
the reaction of said nitrating reagent with said compound of Formula 1.0g taking place in a suitable aprotic solvent; and

said reaction with said nitrating reagent being conducted at a temperature and for a period of time sufficient to allow the reaction to

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proceed at a reasonable rate to produce the 3-nitro compound of Formula 1.0h.

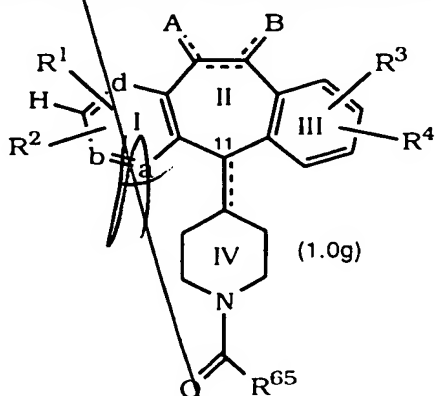
23. A process for producing 3-nitro compounds of the formula:



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wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, comprising:

reacting one molar equivalent of a compound of Formula 1.0g:

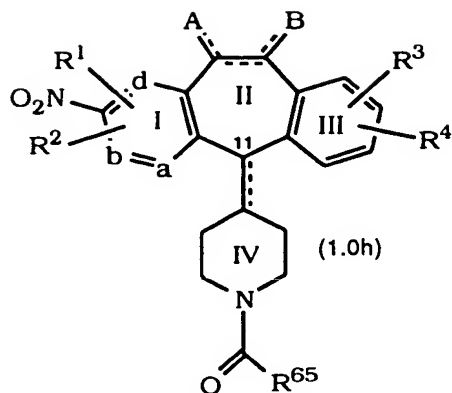


10 wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, and R^{65} represents H or $-OR^{66}$ wherein R^{66} represents alkyl;

15 with one molar equivalent of a nitrating reagent, said nitrating reagent being preformed by mixing, at cold temperature, equimolar amounts of tetrabutyl ammonium nitrate with TFAA;

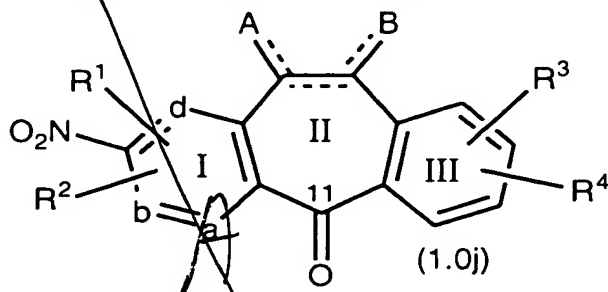
the reaction of said nitrating reagent with said compound of Formula 1.0g taking place in a suitable aprotic solvent; and

20 said reaction with said nitrating reagent being conducted at a temperature and for a period of time sufficient to allow the reaction to proceed at a reasonable rate to produce the 3-nitro compound of Formula 1.0h:



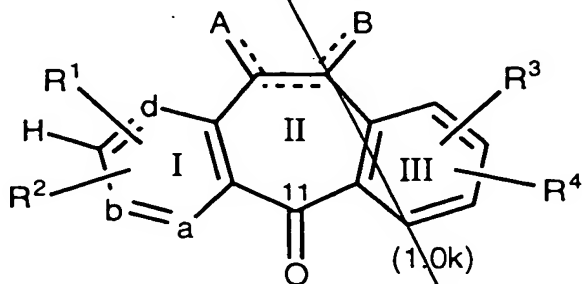
hydrolyzing the compound of Formula 1.0h by dissolving the compound of Formula 1.0h in a sufficient amount of concentrated acid, and heating the resulting mixture to a temperature sufficient to remove the -C(O)R⁶⁵ substituent to produce the compound of Formula 1.0i.

24. A process for producing compounds of the formula:



wherein R¹, R², R³, R⁴, A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, comprising:

reacting one molar equivalent a compound of formula:



with one molar equivalent of a nitrating reagent;

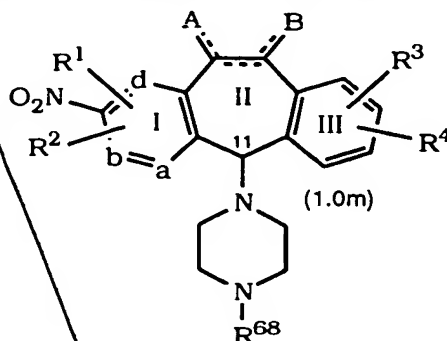
said nitrating reagent being preformed, by mixing at a cold temperature, equimolar amounts of tetrabutyl ammonium nitrate with TFAA;

the reaction of said nitrating reagent with the compound of Formula 1.0k taking place in a suitable aprotic solvent;

said reaction with said nitrating reagent being conducted at a temperature and for a period of time sufficient to allow the reaction to proceed at a reasonable rate to produce the 3-nitro compound of Formula 1.0j.

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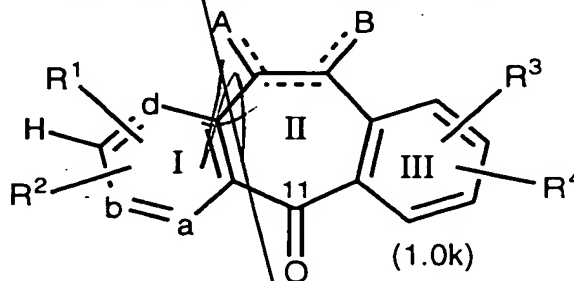
25. A process for producing a compound of Formula 1.0m:



wherein R¹, R², R³, R⁴, A, B, a, b, d, and the dotted lines are as defined for Formula 1.0 in Claim 1, and wherein R⁶⁸ is H or -COOR^a wherein R^a is a C₁ to C₃ alkyl group, comprising:

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reacting one molar equivalent a compound of formula:



with one molar equivalent of a nitrating reagent;

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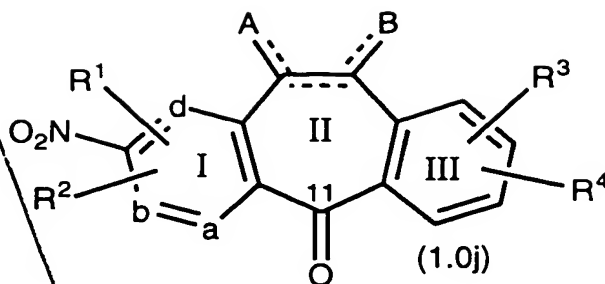
said nitrating reagent being preformed, by mixing at a cold temperature, equimolar amounts of tetrabutyl ammonium nitrate with TFAA;

the reaction of said nitrating reagent with the compound of Formula 1.0k taking place in a suitable aprotic solvent;

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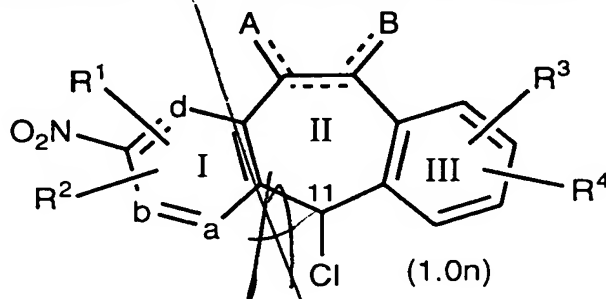
said reaction with said nitrating reagent being conducted at a temperature and for a period of time sufficient to allow the reaction to proceed at a reasonable rate to produce the 3-nitro compound of Formula 1.0j:

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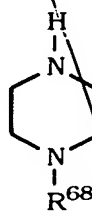
reducing said compound of Formula 1.0j with a suitable reducing agent in a suitable solvent at a suitable temperature to allow the reaction to proceed at a reasonable rate;

- 5 reacting the resulting hydroxy product with a chlorinating agent in a suitable organic solvent at a suitable temperature to allow the reaction to proceed at a reasonable rate to produce a compound of Formula 1.0n:



reacting said compound of Formula 1.0n with a compound of the

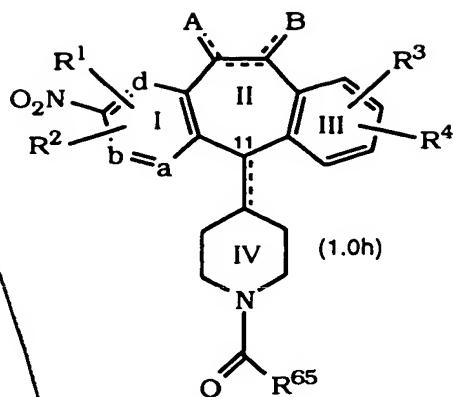
- 10 formula:



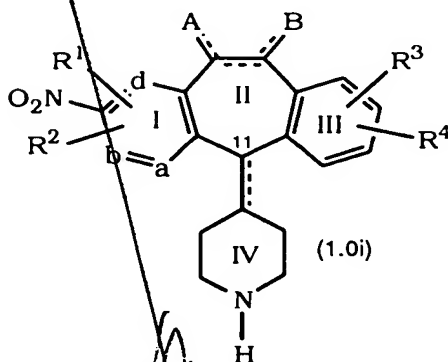
wherein R^{68} is as previously defined, in a suitable organic solvent containing a suitable base at a suitable temperature to allow the reaction to proceed at a reasonable rate to produce the compounds of Formula

- 15 1.0m.

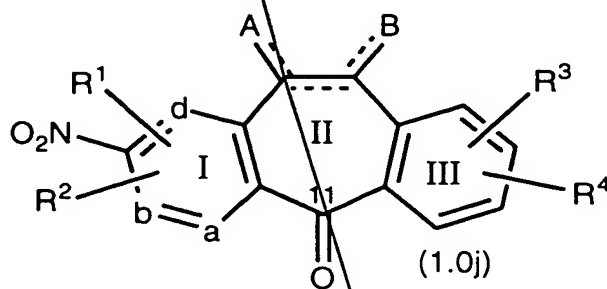
26. A compound selected from a compound of the formula:



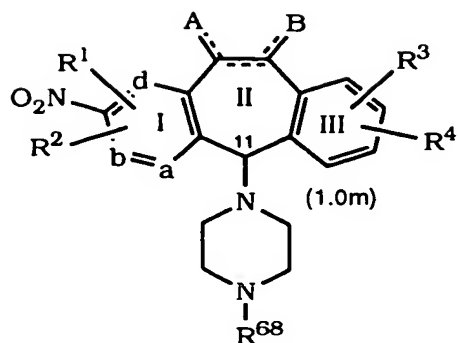
wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, d, and R^{65} are as defined for Formula 1.0h in Claim 22;



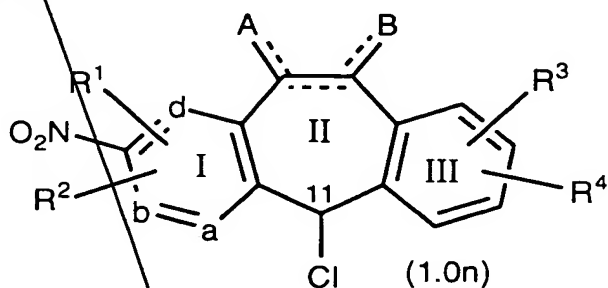
- 5 wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, and d are as defined for Formula 1.0i in Claim 23;



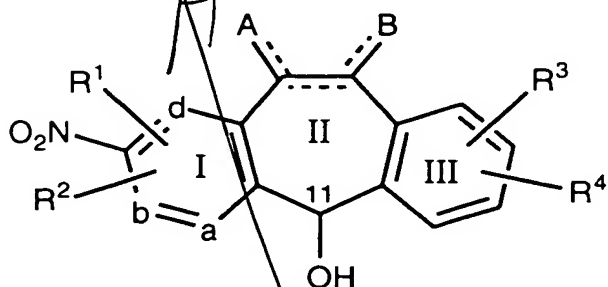
wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, and d are as defined for Formula 1.0j in Claim 24;



wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, d and R^{68} are as defined for Formula 1.0m in Claim 25;



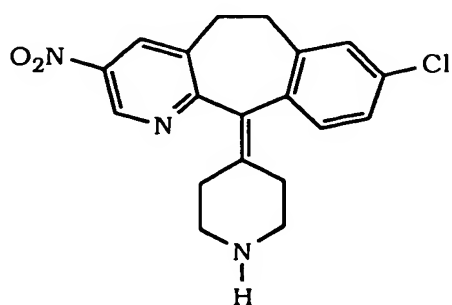
- 5 wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, and d are as defined for Formula 1.0j in Claim 24; or



wherein R^1 , R^2 , R^3 , R^4 , A, B, a, b, and d are as defined for Formula 1.0j in Claim 24.

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27. A compound selected from a compound of the formula:



or

